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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Olivier Ruch

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03/30/2009

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EXAMINER

RAHMIJOO, MANUCHER

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

03/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,762	RUCH, OLIVIER	
	Examiner	Art Unit	
	MIKE RAHMJOO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20- 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/17/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 20 is objected to because of the following informalities:

As per claim 20, line 4 applicant recites "...pairing each point of the second contour with one or zero points of the first contour...". It is unclear how any pairing is made possible if zero points are associated with the first contour and if so no pairing is established.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 20- 38 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a

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statutory process. For example the method of measurement of proximity of a second contour to a first contour is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, manually or without a machine. The Applicant has provided no explicit and deliberate definitions of measurement of proximity of a second contour to a first contour to limit the steps to the electronic/computer implemented form of the "measurement" and the claim language itself is sufficiently broad to read on said method as being implemented mentally, manually or without a machine.

Claims 21- 38 are rejected by the virtue of their dependency up on claim 20.

1 Diamond v. Diehr, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v.*

Benson, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

2 In re Bilski, 88 USPQ2d 1385 (Fed. Cir. 2008).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 recites the limitation "...the points of the pair..." in line 2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction of claim 23 and other claims with similar rejections is respectfully requested.

Claim 38 is rejected under 35 U.S.C. 112 first and second paragraphs as attempting to define a product (i.e., machine or apparatus) entirely by virtue of its function, in the absence of any recited structure.

Products must distinguish over the prior art in terms of their structure (or structure + structure's function when claimed functionally) rather than function alone (MPEP 2114). Therefore, an "apparatus" not having structural limitations fails to "particularly point out and distinctly claim ..." the invention in accordance with 35 U.S.C. 112, 2nd paragraph.

Furthermore, while the specification disclosure may be enabling for a plurality of structural elements performing the claimed functions [1], the specification does not reasonably provide enablement for a single structural element (or no structural elements) performing all of the claimed functions. That is, given the claim in question, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims ("A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph" because a single means claim covers "every conceivable means for achieving the stated purpose" and "the specification disclosed at most only those means known to the inventor" - *MPEP, at paragraph 2164.08(a)*).

Applicant is advised to define the apparatus by virtue of the individual structural element that serve to perform the individual functions recited in the corresponding method claim.

[1] Even when an apparatus is disclosed as being computer implemented (e.g., software implemented on hardware), the requirement remains that there be some structure recited in the body of the claim (e.g., a processor and a memory storing a program which when implemented performs the method steps). For purposes of “means plus function” language, individual disclosed steps corresponding to computer program elements operating on a processor (e.g., inputting, filtering, detecting and resolving) may be considered as separate means (*Dosset*, 115 F.3d at 946–47, 42 USPQ2d at 1885).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 20- 22, 28, 32 and 38 are rejected under 35 U.S.C. 102(e) as being
Wenzel et al by (US PAP 2004/ 0037467), hereinafter, Wenzel.

As per claim 20, Wenzel teaches associating (i.e., transformation via matching) with a point of the second contour (corresponding to the template or target image curve) determined as the closest, and pairing each point of the second contour with one or zero points of the first contour (corresponding to the template or target image curve), by determining the point of the first contour which is closest (i.e., small or no difference/distance between the curves signifying a match) from among the set of points of the first contour that are associated with said point of the second contour see [191]. [199] and figure 10 of Wenzel also teaches transformation of curves (corresponding to the first and second curves with corresponding points therein) more closely matching at iterations.

As per claim 21, Wenzel broadly teaches the determination of a point that is closest to a given point is based on a true or discrete measure of the Euclidean (cross correlation matrix via Euclidean) distance between the two points see [204] and figure 12.

As per claim 22 and in light of the rejections made, Wenzel broadly teaches allocating a measure of proximity $\text{Dist}(M_{\text{sub}.i})$ of each point $M_{\text{sub}.i}$ of the second contour to the first contour (i.e., target and template image curve), based on the measurement (i.e., computation of affine distance between said objects) of the distance from this point to the point of the first contour with which it is paired see [0204].

As per claim 28, Wenzel teaches applying as second contour, a template contour and as first contour, said image contour, so as to obtain the measure of proximity of

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each point of said template contour to said image contour (corresponding to the template and the target image curves and small/ no difference in between to signify a match) see [0191].

As per claim 32, Wenzel teaches identification applied successively to each of the template contours of a collection of template contours (i.e., generation of mapped template image *discrete curves* as a sequence of points or pixels) see [0149].

As per claim 38, Wenzel teaches a database (i.e., the computer system 102 of fig. 3) containing templates of determined objects to be recognized, and means of calculation (i.e., computation of similarity and geometric pattern matching of the curves for identification by said computer system), said means of calculation being configured so as to compare contours, wherein said means of calculation are configured so as to perform the steps of a method of identification as claimed in claim 28.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23- 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenzel in view of Huttenlocher et al (US Patent 6249604), hereinafter, Huttenlocher.

As per claim 23 Wenzel does not teach said distance measure is a

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measure corrected as a function of the difference of class of orientation.

However, Huttenlocher teaches teach said distance measure is a measure corrected as a function of the difference of class of orientation (i.e., line spacing/ word group spacing corresponding to distance to follow the establishment of image orientation) see column 10 lines 55- 67.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Huttenlocher into Wenzel to determine text orientation and text lines and therefore enable subsequent processing and spacing of the words for identification of the word shapes and recognition of the words or symbol strings based on the shapes to further add to the efficiency and utility of the device see column 6 line 1- 6.

As per claim 24 Huttenlocher teaches in the step of associating zero or one points of the second contour with each point of the first contour, the point that is closest from among the points of the second contour which have the same class of orientation as said point of the first contour is associated (corresponding to the establishing/ association of the word group spacing/ distance once the orientation is set) see column 10 lines 55- 67.

Allowable Subject Matter

Claims 25- 27, 29- 31, 33- 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

March 24, 2009

/Mike Rahmjoo/

Examiner, Art Unit 2624